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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/849,746	09/05/1997	URS LOHER	LUDE14.313	4225

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HELFGOTT & KARAS
EMPIRE STATE BUILDING
SUITE 6024
NEW YORK, NY 10118

EXAMINER
STAICOVICI, STEFAN

ART UNIT	PAPER NUMBER
1732	27

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/894,746	Applicant(s) Urs Lohr et al.
	Examiner First Last	Art Unit 1234

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Mar 28, 2002* .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above, claim(s) *17-26* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-16* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Amendment

1. Applicants' amendment filed March 28, 2002 (Paper No. 24) has been entered. Claims 1 and 2 have been amended. No claims have been canceled. No new claims have been added. Claims 1-26 are pending in the instant application.

Claim Rejections - 35 USC § 112

2.The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 2, the phrase "dough- like or honey-like consistency" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). It should be noted that for the purpose of examination has been assumed that "dough-like or honey-like consistency" refer to "plastic flow" of a molten plastic material.

In claims 1 and 2, the limitation of the "*entire blank flowing from* the heating stage into the negative mold" (emphasis added) is unclear as to whether the "heated blank" is in a flowing state, i.e. molten state, or the "heated blank" is shaped in a negative mold after it has been heated and as

such, "flows" from a "heating stage" to a molding stage in a "negative mold". It should be noted that for the purpose of examination it has been assumed that the "heated blank" is in a flowing state, i.e. molten state during its molding in the negative mold. Further clarification is required.

Claims 3-16 are rejected as dependent claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 7, 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 373 294.

EP 0 373 294 teaches the claimed process of forming a fiber reinforced thermoplastic component including, preparing a rod blank (6) from a fiber reinforced thermoplastic material having a plurality of fibers (2) embedded within a PEEK thermoplastic matrix, positioning said blank in a mold, heating said entire blank inside said mold at a temperature above the softening (melting) temperature of the thermoplastic material, hence providing a flowable state (dough-like or honey-like consistency) and compressing said blank inside said mold to form said fiber reinforced thermoplastic component. Since the thermoplastic material is heated above the softening (melting) temperature,

it is submitted that the thermoplastic material flows inside the mold to take the shape of the mold surface (shaping the blank in the negative mold by virtue of the entire blank flowing from the heating stage into the negative mold) (see Abstract and Figure 6).

Regarding claim 2, EP 0 373 294 teaches continuous (endless) fibers in a proportion of 60-70% by weight. It is submitted that a fiber proportion of 70% by weight is more than 50% by volume (see col. 8, lines 10-20).

In regard to claim 3, EP 0 373 294 teaches forming a fiber reinforced thermoplastic rod and cutting said rod to form a blank (see col. 8, lines 10-30).

Specifically regarding claims 4 and 11, EP 0 373 294 teaches teaches continuous (endless) fibers (Elongated fibers) (2) arranged in a parallel direction (col. 8, lines 15-20).

Regarding claim 7, EP 0 373 294 teaches axially compressing a heated pre-finished blank to obtain said fiber reinforced thermoplastic component.

Specifically regarding claim 14, EP 0 373 294 teaches that the fibers are enclosed by the thermoplastic resin (see Figure 7).

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-5, 7, 11-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 02-145327 or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 02-145327 in view of EP 0 373 294.

JP 02-145327 teaches the claimed process for manufacturing fiber reinforced thermoplastic components including, forming a fiber reinforced thermoplastic tubular blank (13), cutting said fiber reinforced thermoplastic tubular blank to form a pre-finished blank (16), positioning said pre-finished blank (16) in a mold (18) (negative mold), heating said pre-finished blank (16) at a given temperature in said mold (18) (heating the entire blank to a forming temperature with dough-like or honey-like consistency in a heating stage) and axially compressing said heated pre-finished blank in said mold (18) to obtain said fiber reinforced thermoplastic component (22). Further, JP 02-145327 teaches that the fibers are enclosed by the thermoplastic resin (see Figures 4-6). Therefore, it is submitted that shaping of the pre-finished blank (16) in mold (18) by heating and axial compression occurs by flowing of the heated thermoplastic material of the pre-finished blank during

the axial compression stage (shaping the blank in the negative mold by virtue of the entire blank flowing from the heating stage into the negative mold).

However, even if the process of shaping of the pre-finished blank (16) in mold (18) by flowing of the heated thermoplastic material of the pre-finished blank during the axial compression stage is not inherent in the teachings of JP 02-145327, EP 0 373 294 teaches heating a fiber reinforced thermoplastic blank in a mold at a temperature above the softening (melting) temperature of the thermoplastic material in order to soften the material (flowing state) such that the fiber reinforced thermoplastic blank assumes the shape of the mold. Therefore, it would have been obvious for one of ordinary skill in the art to have heated the pre-finished blank to bring it to a flowing state as taught by EP 0 373 294 in the process of JP 02-145327, because EP 0 373 294 specifically teaches that the thermoplastic material needs to be in a flowing state in order for molding of the fiber reenforced thermoplastic blank to occur . Furthermore, it should be noted that since both references teach similar processes, materials and end-products, heating and molding of a fiber reinforced thermoplastic blank, then to one of ordinary skill in the art, similar effects are to be expected.

Regarding claim 2, JP 02-145327 teaches continuous (endless) fibers in a proportion of 70% by weight. It is submitted that a fiber proportion of 70% by weight is more than 50% by volume.

In regard to claim 3, JP 02-145327 teaches forming a fiber reinforced thermoplastic tubular blank (13) and cutting said fiber reinforced thermoplastic tubular blank to form a pre-finished blank

(16) prior to heating and axially compressing said heated pre-finished blank in said mold (18) to obtain said fiber reinforced thermoplastic component (22) (hot-forming process).

Specifically regarding claim 4, JP 02-145327 teaches continuous (endless) fibers that are knitted as a braided string (13) and as such correspond to at least a length of the blank.

Regarding claims 5 and 12, JP 02-145327 teaches continuous (endless) fibers that are knitted as a braided string (13) and as such form layers of different fiber orientation along the axial axis, said orientation being between 0°-90° (see Fig. 1B).

In regard to claim 7, JP 02-145327 teaches axially compressing a heated pre-finished blank (16) in a mold (18) by using a punch (20) to obtain said fiber reinforced thermoplastic component (22).

Specifically regarding claim 11, JP 02-145327 teaches continuous (endless) fibers that are parallel to the axis of the blank (see Figures 4-6).

Specifically regarding claim 14, JP 02-145327 teaches that the fibers are enclosed by the thermoplastic resin (see Figures 4-6).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 5-6, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 373 294 in view of Gapp *et al.* (WO 91/02906).

EP 0 373 294 teach the basic claimed process as described above.

Regarding claims 5-6 and 12, EP 0 373 294 do not teach a laminated blank having fibers oriented in different directions. Gapp *et al.* (WO 91/02906) teach a process of manufacturing fiber reinforced thermoplastic components including, forming panels (36) from fiber reinforced thermoplastic material (PEEK), cutting a section (40) from the panel and machining said section (40) to form a machined blank (52) having a head end (54), a shank portion (56) and a tail end (58) (pre-finished blank) (see Figures 1, 4a, 4b). Further, Gapp *et al.* (WO 91/02906) teach that the panel from which the blanks are cut are formed from a plurality of layers (more than one laminate) having fibers oriented in different directions (see page 7, lines 1-10), such as to form a "0/+45/-45/90" layup. Therefore, it would have been obvious for one of ordinary skill in the art to have formed a laminated fiber reinforced thermoplastic blank having fibers oriented in different directions as taught by Gapp *et al.* (WO 91/02906) for molding a fiber reinforced thermoplastic component by the process of EP 0 373 294, as an alternative to using an extruded or drawn fiber reinforced thermoplastic blank, due to a variety of advantages that a laminated blank provides such as simplicity, cost considerations, simpler equipment requirements, increased process versatility and also because both references teach heating and axial compression of a fiber reinforced thermoplastic blank, regardless of the method by which said blank is obtained. Further, it should be noted that both references teach similar materials, processes and end-products.

Specifically regarding claim 15, Gapp *et al.* (WO 91/02906) teach controlling the temperature of the die as a process control parameter to adjust the orientation of the fibers. Although, Gapp *et al.* (WO 91/02906) do not specifically teach the pressing speed as a process variable, it should be noted that the pressing speed is a conventional variable in molding processes which is routinely adjusted for the purpose of positioning and aligning fibers based on the type of resin and fiber employed. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to have used routine optimization in the process of EP 0 373 294 in view of Gapp *et al.* (WO 91/02906) to determine an optimum pressing speed, due to a variety of unclaimed parameters such as the type of resin employed, the type of fibers employed, equipment availability, etc.

11. Claims 6, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02-145327 in view of EP 0 373 294 and in further view of Gapp *et al.* (WO 91/02906).

JP 02-145327 in view of EP 0 373 294 teach the basic claimed process as described above.

Regarding claim 6, JP 02-145327 in view of EP 0 373 294 do not teach a laminated blank. Gapp *et al.* (WO 91/02906) teach a process of manufacturing fiber reinforced thermoplastic components including, forming panels (36) from fiber reinforced thermoplastic material (PEEK), cutting a section (40) from the panel and machining said section (40) to form a machined blank (52) having a head end (54), a shank portion (56) and a tail end (58) (pre-finished blank) (see Figures 1, 4a, 4b). Therefore, it would have been obvious for one of ordinary skill in the art to have formed a laminated fiber reinforced thermoplastic blank as taught by Gapp *et al.* (WO 91/02906) for molding

a fiber reinforced thermoplastic component by the process of JP 02-145327 in view of EP 0 373 294, as an alternative to using a braided fiber reinforced thermoplastic blank, due to a variety of advantages that a laminated blank provides such as simplicity, cost considerations, simpler equipment requirements, increased process versatility and also because both references teach heating and axial compression of a fiber reinforced thermoplastic blank, regardless of the method by which said blank is obtained. Further, it should be noted that both references teach similar materials, processes and end-products.

In regard to claim 8, Gapp *et al.* (WO 91/02906) teach heating the blank to a temperature of 725 °F (385 °C) and then under pressure, cooling the shaped blank until a temperature of 400 °F (204 °C). Therefore, it would have been obvious for one of ordinary skill in the art to have heated the blank at a temperature from about 350 °C to 430 °C as taught by Gapp *et al.* (WO 91/02906) in the process of JP 02-145327 in view of EP 0 373 294 because Gapp *et al.* (WO 91/02906) specifically teach such a molding temperature and EP 0 373 294 teaches heating the fiber reinforced thermoplastic blank at a temperature above the softening (melting) temperature of the thermoplastic material.

Specifically regarding claim 15, Gapp *et al.* (WO 91/02906) teach controlling the temperature of the die as a process control parameter to adjust the orientation of the fibers. Although, Gapp *et al.* (WO 91/02906) do not specifically teach the pressing speed as a process variable, it should be noted that the pressing speed is a conventional variable in molding processes which is routinely adjusted for the purpose of positioning and aligning fibers based on the type of resin and fiber

employed. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to have used routine optimization in the process of JP 02-145327 in view of EP 0 373 294 and in further view of Gapp *et al.* (WO 91/02906) to determine an optimum pressing speed, due to a variety of unclaimed parameters such as the type of resin employed, the type of fibers employed, equipment availability, etc.

12. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02-145327 in view of EP 0 373 294 and in further view of Gotoh *et al.* (US Patent No. 5,223,526).

JP 02-145327 in view of EP 0 373 294 teach the basic claimed process as described above.

Regarding claim 10, JP 02-145327 in view of EP 0 373 294 do not teach a carbon fiber reinforced PAEK material. Gotoh *et al.* ('556) teach a carbon fiber reinforced PAEK material. Further, Gotoh *et al.* ('556) teach PAEK as a replacement for nylon (see col. 1, lines 44-62). Therefore, it would have been obvious for one of ordinary skill in the art to have used a carbon fiber reinforced PAEK material as taught by Gotoh *et al.* ('556) in the process of JP 02-145327 in view of EP 0 373 294, because Gotoh *et al.* ('556) specifically teach PAEK as a replacement for nylon in case of high temperature applications, hence enhancing product quality. Further, it should be noted that the particular use of a certain material is dependent on a variety of unclaimed parameters such as availability, cost considerations, desired characteristics, weight requirements, etc.

In regard to claims 8, JP 02-145327 in view of EP 0 373 294 do not teach a forming temperature of 350-450 °C. EP 0 373 294 teaches heating a fiber reinforced thermoplastic blank in a mold at a temperature above the softening (melting) temperature of the thermoplastic material in

order to soften the material (flowing state) such that the fiber reinforced thermoplastic blank assumes the shape of the mold. Gotoh *et al.* ('556) teach that the molding temperature of PAEK is from about 350 °C to 430 °C (see col. 2, lines 61-65). Therefore, it would have been obvious for one of ordinary skill in the art to have heated the blank at a temperature from about 350 °C to 430 °C as taught by Gotoh *et al.* ('556) in the process of JP 02-145327 in view of EP 0 373 294 because Gotoh *et al.* ('556) specifically teach that such a molding temperature and EP 0 373 294 teaches heating the fiber reinforced thermoplastic blank at a temperature above the softening (melting) temperature of the thermoplastic material.

13. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 373 294 in view of Gotoh *et al.* (US Patent No. 5,223,526).

EP 0 373 294 teach the basic claimed process as described above.

Regarding claim 10, EP 0 373 294 do not teach a carbon fiber reinforced PAEK material. Gotoh *et al.* ('556) teach a carbon fiber reinforced PAEK material. Further, Gotoh *et al.* ('556) teach PAEK as an equivalent replacement for PEEK (see col. 2, lines 52-62). Therefore, it would have been obvious for one of ordinary skill in the art to have used a carbon fiber reinforced PAEK material as taught by Gotoh *et al.* ('556) in the process of EP 0 373 294, because Gotoh *et al.* ('556) specifically teach PAEK as an equivalent replacement for PEEK. Further, it should be noted that the particular use of a certain material is dependent on a variety of unclaimed parameters such as availability, cost considerations, desired characteristics, weight requirements, etc.

In regard to claims 8, EP 0 373 294 do not teach a forming temperature of 350-450 °C. EP 0 373 294 teaches heating a fiber reinforced thermoplastic blank in a mold at a temperature above the softening (melting) temperature of the thermoplastic material in order to soften the material (flowing state) such that the fiber reinforced thermoplastic blank assumes the shape of the mold. Gotoh *et al.* ('556) teach that the molding temperature of PAEK is from about 350 °C to 430 °C (see col. 2, lines 61-65). Therefore, it would have been obvious for one of ordinary skill in the art to have heated the blank at a temperature from about 350 °C to 430 °C as taught by Gotoh *et al.* ('556) in the process of EP 0 373 294 because Gotoh *et al.* ('556) specifically teach that such a molding temperature and EP 0 373 294 teaches heating the fiber reinforced thermoplastic blank at a temperature above the softening (melting) temperature of the thermoplastic material.

14. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 373 294 in view of DE 37 39 582 A1.

EP 0 373 294 teaches the basic claimed process as shown above.

Regarding claim 16, EP 0 373 294 does not teach applying a surface seal. DE 37 39 582 A1 teach a process of coating a molten plastic material by applying a carbon coating to a mold surface, injecting a molten plastic material inside the mold, and depositing said coating onto said melt as the carbon coating comes into contact with the molten polymer. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to have provided a carbon coating on the mold surface as taught by DE 37 39 582 A1 in the process of EP 0 373 294 due to a variety of

advantages that such a coating process provides such as, reduced pollution, improved productivity, etc. and also because a carbon coated fastener provides for improved electrical characteristics.

15. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02-145327 in view of EP 0 373 294 and in further view of DE 37 39 582 A1.

JP 02-145327 in view of EP 0 373 294 teaches the basic claimed process as shown above.

Regarding claim 16, JP 02-145327 in view of EP 0 373 294 does not teach applying a surface seal. DE 37 39 582 A1 teach a process of coating a molten plastic material by applying a carbon coating to a mold surface, injecting a molten plastic material inside the mold, and depositing said coating onto said melt as the carbon coating comes into contact with the molten polymer. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to have provided a carbon coating on the mold surface as taught by DE 37 39 582 A1 in the process of JP 02-145327 in view of EP 0 373 294 due to a variety of advantages that such a coating process provides such as, reduced pollution, improved productivity, etc. and also because a carbon coated fastener provides for improved electrical characteristics.

16. Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 373 294 or JP 02-145327 in view of EP 0 373 294.

EP 0 373 294 or JP 02-145327 in view of EP 0 373 294 teaches the basic claimed process.

Regarding claim 9, EP 0 373 294 or JP 02-145327 in view of EP 0 373 294 does not teach the use of carbon or graphite as a release agent. However, the use of carbon or graphite as a release agent is well known in the art. It would have been obvious for one of ordinary skill in the art at the

time of the invention to have used carbon or graphite as a release agent in the process of EP 0 373 294 or JP 02-145327 in view of EP 0 373 294 due to a variety of unclaimed parameters such as cost considerations, material availability, simplicity, etc.

In regard to claim 13, although EP 0 373 294 or JP 02-145327 in view of EP 0 373 294 does not teach the use of fibers having a length of 3 mm, carbon fibers having a length of at least mm are well known in the art. It would have been obvious for one of ordinary skill in the art at the time of the invention to have used carbon fibers having a length of at least of 3 mm in the process of EP 0 373 294 or JP 02-145327 in view of EP 0 373 294, due to a variety of unclaimed parameters such as cost considerations, material availability, desired length of the final product, desired characteristics of the final product, etc. Furthermore, it should be noted that since EP 0 373 294 or JP 02-145327 in view of EP 0 373 294 teach the use of continuous fibers having the same length as the resulting molded article, and since screws (fasteners) longer than 3 mm are well known in the art, it would have been obvious for one of ordinary skill in the art to have provided carbon fibers having a length of at least of mm in the process of EP 0 373 294 or JP 02-145327 in view of EP 0 373 294 to manufacture fasteners longer than 3 mm, due to a variety of unclaimed parameters such as cost considerations, material availability, desired length of the final product, desired characteristics of the final product, etc.

Response to Amendment

17. Applicant's arguments filed March 28, 2002 (Paper No. 24) have been fully considered.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants argue that the art of record does not or suggest "heating of the blank in one portion of a mold arrangement, followed by transfer to a shape-forming portion of that arrangement" (see page 9 of the amendment filed March 28, 2002). In response, it is noted that the features upon which applicant relies (i.e., heating in a first portion of a mold arrangement and then transferring to a second mold portion for shaping) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It should be noted that the rejected claims recite a single mold, specifically a "negative mold" and do not include a separate, positive step of "transferring a heated blank to a shape-forming mold" as argued by Applicants.

Applicants' arguments drawn to dependent claims 3-16 are not persuasive since said arguments are drawn to the same subject matter as discussed above for independent claims 1-2.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (703) 305-0396. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM and alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan H. Silbaugh, can be reached at (703) 308-3829. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Stefan Staicovici, PhD

AU 1732 6/17/02

SS

June 17, 2002